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of these experiments are, that no line was lost from the spectrum, except through the loss of the spectrum itself, and that the spectrum shortened with increase of elevation.

The shortening of the spectrum with increase of elevation may have been, and most likely was, owing to want of light, (although to my senses there was abundance), the sky was of a deep dark blue, the sun was low, and it is possible the light was insufficient. For this class of observations it will be necessary to have a morning or mid-day ascent, for comparison of results with the preceding as well as to determine whether really the spectrum shortens with elevation or not.

*Results of the Meridional Observations of Small Planets; Occultations of Stars by the Moon; and Phenomena of Jupiter's Satellites; observed at the Royal Observatory, Greenwich, in the months of February and March, 1863.*

(Communicated by the Astronomer Royal.)

*Astræa* (5).

Mean Solar Time of Observation.				R. A. from Observation.			N. P. D. from Observation.			
		h	m	s	h	m	s	°	'	"
1863, Feb.	3	13	23	41.3	10	18	33.47	78	57	20.09
	12	12	41	48.1	10	12	2.42	77	44	56.16
	13	12	37	5.1	10	11	15.20	77	36	35.35
	16	12	22	53.7	10	8	51.07	77	11	32.87
	21	11	59	11.7	10	4	48.03	76	30	14.05
	27	11	30	55.5	10	0	6.47	75	43	7.56
	28	11	26	15.0	9	59	21.72	75	35	41.74
Mar.	3	11	12	19.1	9	57	13.25	75	14	10.08
	4	11	7	42.5	9	56	32.37	75	7	17.41
	11	10	36	1.6	9	52	22.20	74	24	7.20
	16	10	14	8.0	9	50	7.74	73	59	2.40
	17	10	9	50.2	9	49	45.77	73	54	41.46
	21	9	52	57.5	9	48	36.48	73	39	18.79
	23	9	44	42.1	9	48	12.83	73	32	56.47
	24	9	40	37.0	9	48	3.63	73	30	6.51
	25	9	36	34.1	9	47	56.65	73	27	27.25
	26	9	32	32.8	9	47	51.26	73	25	0.76
	27	9	28	33.7	9	47	48.07	73	22	49.03
	31	9	12	55.6	9	47	53.61	73	16	6.62

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*Victoria* (12).

Mean Solar Time of Observation.			R.A. from Observation.			N.P.D. from Observation.			
	h	m	s	h	m	s	°	'	"
1863, Feb. 13	11	37	22.5	9	11	22.76	87	12	36.29
16	11	22	41.0	9	8	28.53	86	57	52.78
17	11	17	48.3	9	7	31.56	86	52	43.48
28	10	24	59.3	8	57	55.96	85	53	2.85
Mar. 3	10	10	57.2	8	55	41.27	85	36	17.41
17	9	8	8.4	8	47	53.81	84	20	40.25
21	8	51	6.2	8	46	35.02	84	1	4.52

*Irene* (14).

Mean Solar Time of Observation.			R.A. from Observation.			N.P.D. from Observation.				
	h	m	s	h	m	s	°	'	"	
1863, Feb.	12	13	29	29.6	10	59	51.76	67	36	19.84
	13	13	24	52.2	10	59	10.11	67	27	13.42
	14	13	20	13.6	10	58	27.32	67	18	10.24
	16	13	10	52.7	10	56	57.95	67	0	18.92
	17	13	6	10.7	10	56	11.76	66	51	32.73
	28	12	13	38.3	10	46	52.86	65	26	2.62
Mar.	3	11	59	12.6	10	44	14.40	65	7	17.03
	4	11	54	24.2	10	43	21.80	65	1	32.69
	17	10	52	52.5	10	32	55.12	64	13	35.83
	21	10	34	33.2	10	30	19.08	64	9	20.45
	23	10	25	32.8	10	29	10.25	64	9	1.52
	24	10	21	4.8	10	28	38.11	64	9	20.63
	25	10	16	38.9	10	28	8.04	64	9	57.18
	26	10	12	14.5	10	27	39.47	64	10	51.05
	27	10	7	51.8	10	27	12.60	64	12	2.57
	31	9	50	39.6	10	25	43.74	64	19	39.93

*Urania* (80).

Mean Solar Time of Observation.	R.A. from Observation.	N.P.D. from Observation.
h m s	h m s	o ' "
1863, Feb. 5 8 9 48.4	5 11 42.11	65 36 22.02

*Ariadne* (48).

Mean Solar Time of Observation.	R.A. from Observation.			N.P.D. from Observation.					
	h	m	s	h	m	s	°	'	"
1863, Feb. 14	10	48	27.4	8	26	16.21	75	7	34.27
17	10	33	49.5	8	23	25.59	74	58	8.07
18	9	42	4.7	8	14	54.32	74	27	39.58

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Mean Solar Time of Observation.			R.A. from Observation.	N.P.D. from Observation.
	h m s		h m s	° ' "
1863, Feb. 3	12 29 22.6		9 24 5.86	76 53 46.05
12	11 46 46.2		9 16 51.42	75 34 43.19
13	11 42 2.7		9 16 3.78	75 26 1.69
14	11 37 20.0		9 15 16.81	75 17 20.50
16	11 27 55.9		9 13 44.24	75 0 13.22
17	11 23 15.2		9 12 59.34	74 51 45.05
21	11 4 39.4		9 10 6.77	74 18 46.00
27	10 37 17.3		9 6 19.39	73 32 34.51
28	10 32 47.5		9 5 45.45	73 25 22.98
Mar. 2	10 23 53.4		9 4 42.97	73 11 20.49
3	10 19 28.9		9 4 14.34	73 4 33.56
4	10 15 4.6		9 3 45.84	72 57 57.15
17	9 20 23.8		9 0 11.22	71 46 54.03
21	9 4 32.5		9 0 3.55	71 30 59.42
23	8 56 47.2		9 0 10.14	71 24 7.74
24	8 52 57.3		9 0 16.08	71 20 55.13
25	8 49 9.2		9 0 23.92	71 17 55.65
26	8 45 22.3		9 0 33.00	71 15 0.49
27	8 41 37.8		9 0 44.41	71 12 25.96
31	8 26 55.2		9 1 45.65	71 3 29.85

*Europa* (52).

Mean Solar Time of Observation.			R.A. from Observation.	N.P.D. from Observation.
	h m s		h m s	° ' "
1863, Feb. 3	10 4 41.3		6 59 0.82	70 13 4.54
9	9 38 14.0		6 56 8.47	69 50 33.65
11	9 29 36.9		6 55 23.03	69 43 28.00
13	9 21 5.6		6 54 43.51	69 36 30.49
14	9 16 52.4		6 54 26.17	69 33 5.47
16	9 8 30.7		6 53 56.13	69 26 27.75

*Diana* (78).

Mean Solar Time of Observation.			R.A. from Observation.	N.P.D. from Observation.
	h m s		h m s	° ' "
1863, Mar. 27	11 29 23.7		11 48 57.86	96 56 25.75
31	11 10 0.4		11 45 17.59	96 46 33.45

All the observations of N.P.D. have been corrected for Refraction and Parallax.

Occultations of Stars by the Moon.

Day of Observation.	Phenomenon.	Moon's Limb.	Mean Solar Time.	Observer.
1863.			<sup>h</sup> <sup>m</sup> <sup>s</sup>	
Feb. 11	15 Geminorum, disapp.	Dark	9 43 15.84	S.
Mar. 2	α Cancri, disapp.	Dark	11 48 54.8	C.

The star, the occultation of which was observed on Jan. 27, and printed without a name in the last number of the *Monthly Notices*, page 174, was δ *Arietis*.

Phenomena of Jupiter's Satellites.

Day of Observation.	Satellite.	Phenomenon.	Mean Solar Time.	Observer.
1863.			<sup>h</sup> <sup>m</sup> <sup>s</sup>	
Feb. 16	I	Eclipse, disapp.	14 2 27.1	E.
17	I	Ingress, first cont.	12 3 35.7	R.
„	I	„ bisection	12 6 35.2	R.
„	I	„ total ingress	12 10 34.6	R.
„	I	Egress, first cont.	14 14 42.9	R.
„	I	„ bisection	14 18 42.3	R.
„	I	„ last cont.	14 21 26.8	R.
Feb. 28	II	Eclipse, disapp.	12 42 6.2	E.
Mar. 11	I	Eclipse, disapp.	14 10 32.1	D.
25	II	(a) Eclipse, disapp.	9 43 25.3	C.
„	II	Occ. reapp. bisection	12 59 40.7	C.
„	II	„ last cont.	13 0 55.5	C.
26	III	Eclipse, disapp.	13 20 57.1	J. C.
27	I	Eclipse, disapp.	12 25 34.9	D.

(a) The satellite extremely faint, the observation very unsatisfactory.

The initials S., D., E., C., J. C., and R., are respectively those of Mr. Stone, Mr. Dunkin, Mr. Ellis, Mr. Criswick, Mr. Carpenter, and Mr. Roberts.

Note on the Appearance of the Dark Ring of Saturn.  
By J. Carpenter, Esq.

During the observation of *Saturn* with the transit-circle, on the evening of March 26th, 1863, it struck me that the dark space between the ring and the ball seemed much contracted. Upon looking at it with the Equatoreal I found that this arose from a great increase in the brightness of the dusky ring, which appeared nearly as bright as the illuminated ring, and might easily have been mistaken for a part of it.